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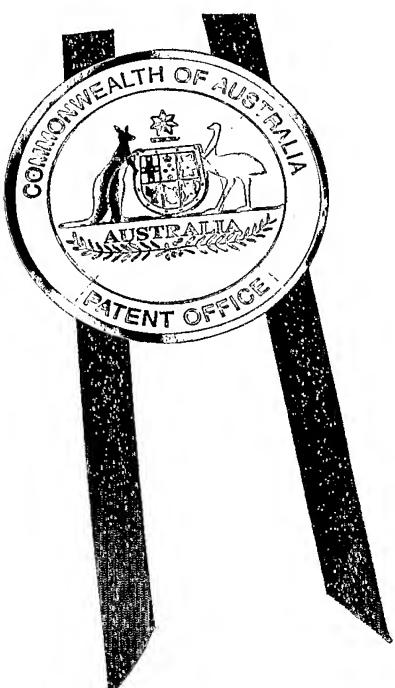


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I, LEANNE MYNOTT, MANAGER EXAMINATION SUPPORT AND SALES hereby certify that annexed is a true copy of the Provisional specification in connection with Application No. 2003906880 for a patent by JAMES LEE GARDINER as filed on 12 December 2003.

WITNESS my hand this
Seventh day of January 2005

LEANNE MYNOTT
MANAGER EXAMINATION SUPPORT
AND SALES



JAMES LEE GARDINER

FORM 9
COMMONWEALTH OF AUSTRALIA
Patents Act 1990

PROVISIONAL SPECIFICATION FOR THE INVENTION ENTITLED:
"RECLOSABLE CAP FOR A BEVERAGE CONTAINER"

This invention is described in the following statement:

RECLOSABLE CAP FOR A BEVERAGE CONTAINER
TECHNICAL FIELD

THIS INVENTION relates to a reclosable cap for a beverage container, the cap having a partially severable portion which can be severed to reveal a dispensing aperture and a movable panel selectively positionable for re-closing the aperture.

BACKGROUND OF THE INVENTION

The applicant has observed that beverage containers, especially aluminium alloy drink cans, have a cap with a partially severable portion that must be severed to reveal a dispensing aperture for dispensing the beverage therein. The severed portion cannot reclose the aperture. Many cans are designed to press the severed portions into the interior of the cans and the severed portions are not retrievable. In some known cans the severed portions can be totally removed. In generally, a tab opener that is pivotally fixed to the cap is used to open a can by pressing against the severable portion until severed.

Once opened, the dispensing apertures of these containers remain open. The opened containers allow insertion of undesirable substances such as drugs into the containers without any need to tamper with them. In addition, insects such wasps, flies and undesired objects such as dusts can find their way in the container.

Many people drink beverages directly from the aperture in the cap. Wasps, flies and other foreign matters that have entered the container after opening and left unattended, can be consumed by drinkers.

OBJECT OF THE INVENTION

It is an object of the present invention to alleviate or to at least reduce to a certain level one or more of the prior art disadvantages.

SUMMARY OF THE INVENTION

In one aspect therefor the present invention resides in a cap for a beverage container having a hollow body member with opposed ends, a bottom member at one end thereof and the cap is for fixing to the other end thereof. The cap comprises a panel member configured to extend over said other end and the panel member having a main portion and a partially or fully severable portion, and an

opener arranged for a user of the container to manually move the opener to apply a pressure on said severable portion for severing same and thereby forming a dispensing aperture in a zone defined by the severed portion. The cap also has a closure member arranged to be movable relative to the panel member. The closer member is configured for manually controllable to move in a first direction to close the dispensing aperture and in a second direction to reveal the aperture for dispensing the beverage therein.

In another aspect therefor the present invention resides in a beverage container comprising a hollow body member with opposed ends, a bottom member at one end thereof and a cap fixed to the other end thereof. The cap has a panel member configured to extend over said other end and the panel member having a main portion and a partially or fully severable portion, and an opener arranged for a user of the container to manually move the opener to apply a pressure on said severable portion for severing same and thereby forming a dispensing aperture in a zone defined by the severed portion. The cap also has a closure member arranged to be movable relative to the panel member. The closer member is configured for manually controllable to move in a first direction to close the dispensing aperture and in a second direction to reveal the aperture for dispensing the beverage therein.

In preference, the panel member is fixed or for fixing to the body member at said other end by a seaming process.

The panel member may have a weakened section from which a perimeter of the severable portion can be severed from the main portion by application of a pressure to the severable portion. The weakened section may extend fully or partly around the severable portion. Where the weakened section extending fully around the severable portion, the severed portion can be separated from main portion.

The weakened section extending partly around the severable portion may be arranged so that the severed portion is pressed by the opener to move towards one side of the dispensing aperture.

Preferable, the weakened section is formed by a score line along said perimeter.

The opener may be in the form of a pull tab pivotally mounted to the main portion. Preferably, the tab has an inner end lying over the severable portion and an outer end. In use, the outer end is pulled upwards to pivot the inner end downward to apply pressure to the severable portion to sever same. It is further preferred that the main portion has a top surface and a first rivet with an upper end extending from its top surface, and the pull tab is pivotally mounted on the rivet and arranged above the top surface.

The panel member may have an under surface and the closure member is preferably arranged on or beneath the under surface. Advantageously, the closure member has a handle arranged to extend through the dispensing aperture. The handle allows the user to manually move the closure member in the first direction to a closed position and in the second direction to a dispensing position.

The closure member may be arranged to be rotatably movable relative to the panel member. In preference, the closure member is in the form of a disk rotatably mounted on a second rivet fixed to the main portion or on a post extending from the first rivet. The post for the can be bonded to the under surface of the panel member.

The first rivet may have a hollow section and the post is preferably fixed in the hollow section. The upper end of the first rivet is preferred wedge shaped in order to positively retain the opener when the opener is moved to sever the severable portion. Preferably, the post has an outer end within said upper end of the first rivet and the outer end is shaped to be retained by said upper end. More preferably, the outer end is formed in a compatible wedge shape. The post may have an inner end opposite to said outer end and the inner end is preferably an enlarged head to positively retain the closure member.

Alternatively, the main portion may have a recessed section arranged to receive a bent or curved part of the closure member so that the closure member is rotatably supported therein. In another form, the cap member may have a groove formed in the countersink and the closure member is configured to be rotatably supported in the groove.

The closure member can have printed matter thereon for promotional

purposes such as awarding a prize, so that when it is pivoted across the dispensing aperture to close the aperture to prevent foreign objects such as wasps and flies entering the container the promotional matter can be clearly seen.

5 Typically, the closure member is arranged to seal said dispensing aperture when it is in the closed position. In one form, a sealing compound is applied to the closure member in order to assist in retaining the carbonation of the beverage in the can when the closure member is in the closed position.

BRIEF DESCRIPTION OF THE DRAWINGS

10 In order that the invention can be clearly understood and put into practical effect the invention will now be described in reference to the accompanying drawings which illustrate non-limiting embodiments of the present invention, and wherein:-

Figure 1 is a perspective view of a beverage container according to an embodiment of the present invention;

15 Figure 2 is a cross sectional view of the container shown in Figure 1;

Figure 3 is an enlarged partial cross sectional view of the container shown in Figure 1;

Figure 4 is an enlarged partial cross sectional view of the cap member shown in Figure 3;

20 Figure 5 is a perspective view of the beverage container shown in Figure 1 after the container has been opened and the closure member is in a closed position;

Figure 6 show the beverage container of Figure 5 with the closure member in the open position;

25 Figure 7A is an enlarged view of the underside of the cap member before the container is opened;

Figure 7B is an enlarged view of the underside of the cap member after the container is opened and the door in a closed position;

Figure 8A shows another form of the closure member for the container shown in Figure 7A;

30 Figure 8B shows the container of Figure 8A with closure member in the closed position;

Figure 9A is a further form of the closure member for the container shown in Figure 7A with the closure member in the open position;

Figure 9B shows the container of Figure 9A with the closure member in the closed position;

5 Figure 10 is an enlarged partial cross sectional view of the cap member shown in Figure 9A;

Figure 11 is an enlarged cross sectional view of yet another further form of the closure member and panel member for the container shown in Figure 1;

10 Figure 12 is an enlarged cross sectional view of a different form of the closure member and panel member shown in Figure 11;

Figure 13 is an enlarged partial cross sectional of the container shown in Figures 1 to 7 as it is being opened;

15 Figure 14 is an enlarged partial cross sectional view of the tubular body member, an enlarged cross sectional view of the closure member and panel member before the panel member is seamed to the tubular body member; and

Figure 15 is an enlarged partial cross sectional view of the closure member shown in Figure 14.

DETAILED DESCRIPTION OF THE DRAWINGS

Referring initially to Figures 1 to 7 there is shown a beverage container 10 which in this case is in the form of an aluminium alloy beverage can for a beverage such as any one of beer, carbonated drink, fruit juice and the like. It should be noted that the container 10 can also be made of steel or plastic or any material that can be formed into a can.

25 The can 10 has a tubular body member 12 with a top open end and a bottom end. As can be seen in Figure 2 a base 14 is integrally formed at the bottom end to close this end, and a cap 16 is sealingly fixed to the periphery at the top open end by seaming in this case. A rim 18 is formed at the seam.

30 The can 10 as shown is an easy open type. The cap or panel member 16 has a severable portion 20 with its severable perimeter defined by a score line 22. A ring pull tab 24 fixed to the panel member 16 by a rivet 26. The tab 24 has an outer end configured for lifting or pulling with a user's finger and an inner extending over

the severable portion 20. The tab 24 when pulled moves pivotally so that its inner end presses against the portion 20 to partially sever the portion 20 along the score line 22. The partially severed portion 20 remains connected with the main portion of the panel member 16 at a position shown as 71. Further pulling of the tab 24 would bend the severed portion 20 into the can 10 about the position 71. Thereby, a dispensing or pour aperture 38 is presented for dispensing the beverage in the can 10.

Figures 2 and 3 show that the panel member 16 has a post 41 fixed in the hollow section of the underside of the rivet 26. A closure member 67 in the form of a disk is rotatably mounted to the post 41. The disk 67 has a handle 49 accessible through the aperture 38, thereby allowing the disk 67 to be rotated by using the handle 49.

Figure 4 shows the post 41 has a head 90 and a recessed section 91 to which the disk 67 is rotatably mounted. The recessed section 91 and the head 90 prevent separation of the disk 67 from the post. The rivet 26 is hollow and its top end is in the form of a cam or wedge shaped section 37. The interior of the section 37 is also wedge shaped. The inner end 29 of the post 41 is within the wedge shaped interior and this end is flared to assist retaining the post 41 in the rivet 26.

Figure 6 shows that the handle 49 is above the top surface of the cap 16 when the severable portion 20 is pressed to the position as shown in this Figure. The handle 49 is positioned that it has minimal interference with the severing action and the disk 67 is made of a resilient material so that the handle 49 would extend through the aperture 38 when the severed portion 20 moves past the handle 49. The user can push the handle 49 to move the disk 67 to the closed position as shown in Figure 5. Figure 5 shows the disk 67 is in the closed position after the panel member 16 has been opened by severing the portion 20. The disk 67 has the word WIN 87 printed as one example for the promotional use of the product.

Figure 7A shows the underside view of the panel member 16 where the disk 67 is in the open position and the severable portion 20 is intact with the panel member 16. When the portion 20 is severed and pressed into the can 10, the handle 49 will be exposed through so formed the aperture 38 as shown in Figure

7B. Returning to Figure 6, the can 10 as shown is opened by severing the portion 20 which is folded down and remained attached to the panel member 16 in the position marked as 71. The handle 49 is exposed through the aperture 38.

Figure 8A and 8B shows another form of the closure member or disk 67. As shown in Figure 8A, the disk 67 is circular in shape and has an outer peripheral edge 105 and a hole 52 in the disk 67 is partially covering the underside of the severable portion 20 before opening the can 10. When opening, the severable portion 20 passes through the hole 52 and the portion 20 contacts a downward curved section 172 and pivots the disk 67 to allow the handle 49 to be exposed through the dispensing aperture 38. Figure 8B shows the door 67 is a closed position covering the aperture 38. Figure 13 shows that the tab 24 when lifted folds the severed portion 20 down about the position 71. The disk 67 has a curved section 172 to receive the opening portion 20 and rotate the disk 67 to an open position.

Figures 9A to 10 shows a further form of the invention. In Figure 9A, there is shown that the panel member 16 has a score line 93 to allow the tab 24 and severable portion 20 to be totally removed from the panel member 16 when opened. An indent or stop 152 is formed in the panel member 16 to prevent the disk 67 from moving to an inaccessible position. Figure 10 shows another rivet 132 is formed with the wedge section 58 in the panel member 16 to apply the post 41. In another form the post 41 is bonded to the underside of the panel member 16. Figure 9B shows the panel member 16 after it has been opened and the disk 67 has been pivoted to close the aperture 38.

Figures 11 to 12 shows another embodiment of the invention. As shown in Figure 11, the panel member 16 has a groove 34 formed in the inner wall to receive a curved section 54 on the disk 67. The curved section 54 is configured so that it is supported in and can rotate in the groove 34 to thereby allow the user to move the disk 67 to the closing and opening positions. Figure 12 shows the panel member 16 has a groove 47 formed on the outer wall to receive the curved section 97 of the disk 67. The curved section 97 can rotate in the groove 47 to allow the disk 67 to be positioned for closing and opening of aperture 38.

Figure 14 shows another embodiment of the invention where the disk 67 is fixed between the tubular member 12 and the cap member 16. The disk 67 has an outer peripheral portion 95 to be fixed between the tubular body member 12 and cap member 16 allowing the disk 67 to rotate. Figure 15 shows the disk 67 has grooved section 5 to receive the curved section 7 on the outer peripheral portion 95 allowing the disk 67 to rotate.

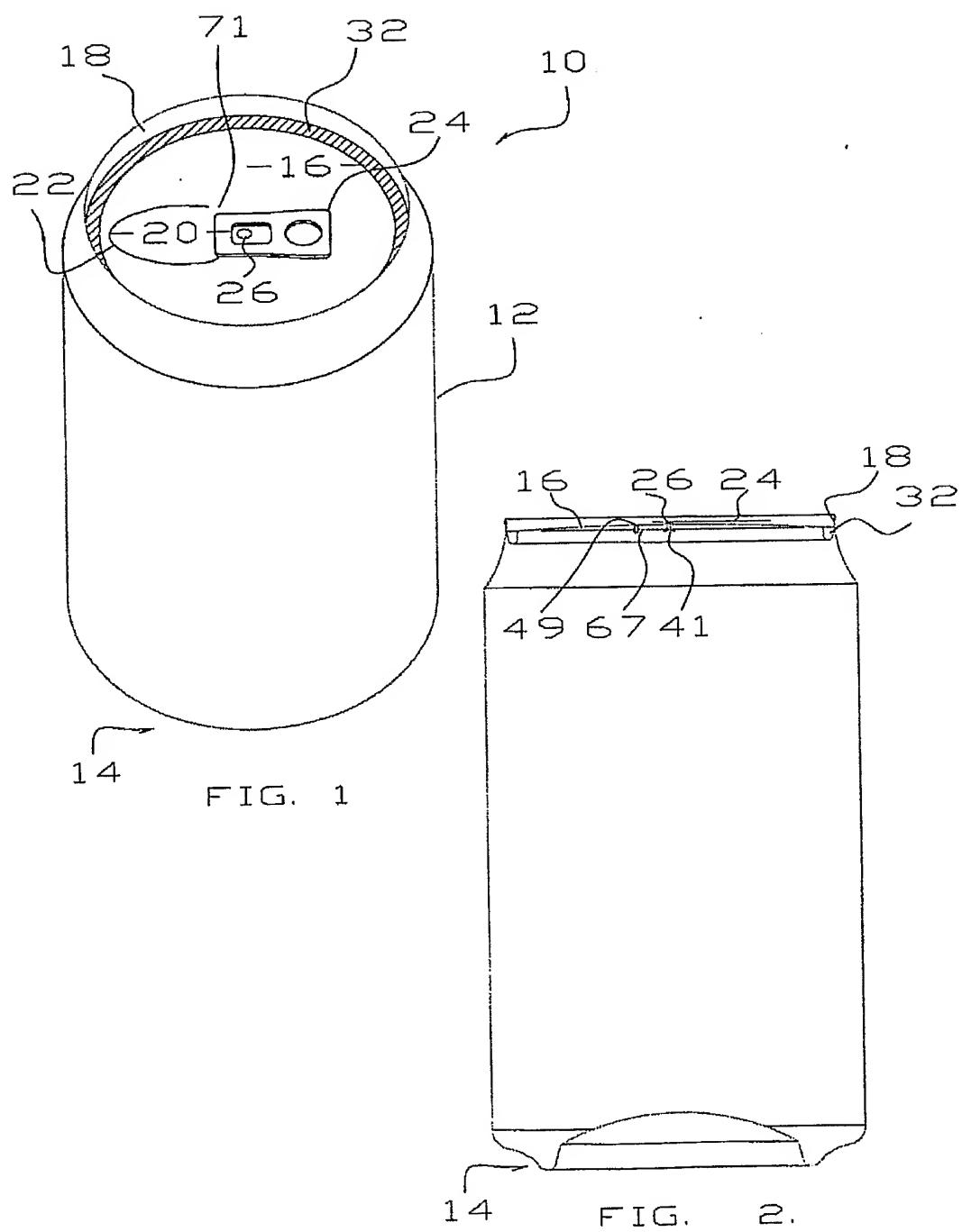
Whilst the above has been given by way of illustrative example of the present invention many variations and modifications thereto will be apparent to those skilled in the art without departing from the broad ambit and scope of the invention as herein set forth.

DATED this 12th day of December 2003

JAMES LEE GARDINER

by his Patent Attorneys

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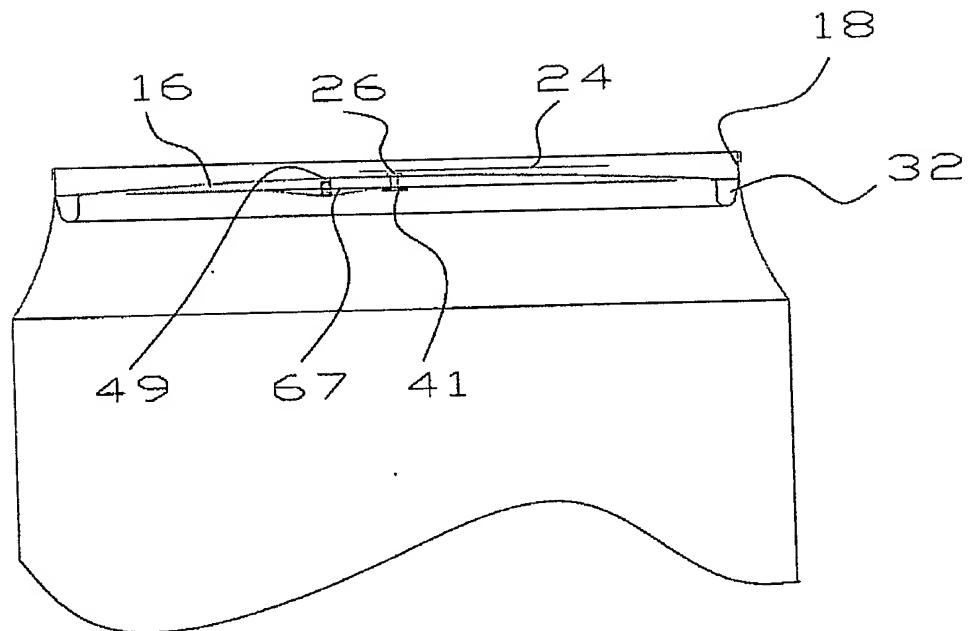


FIG. 3

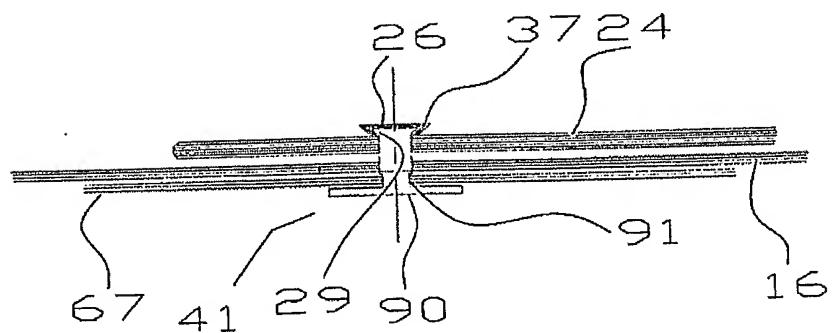
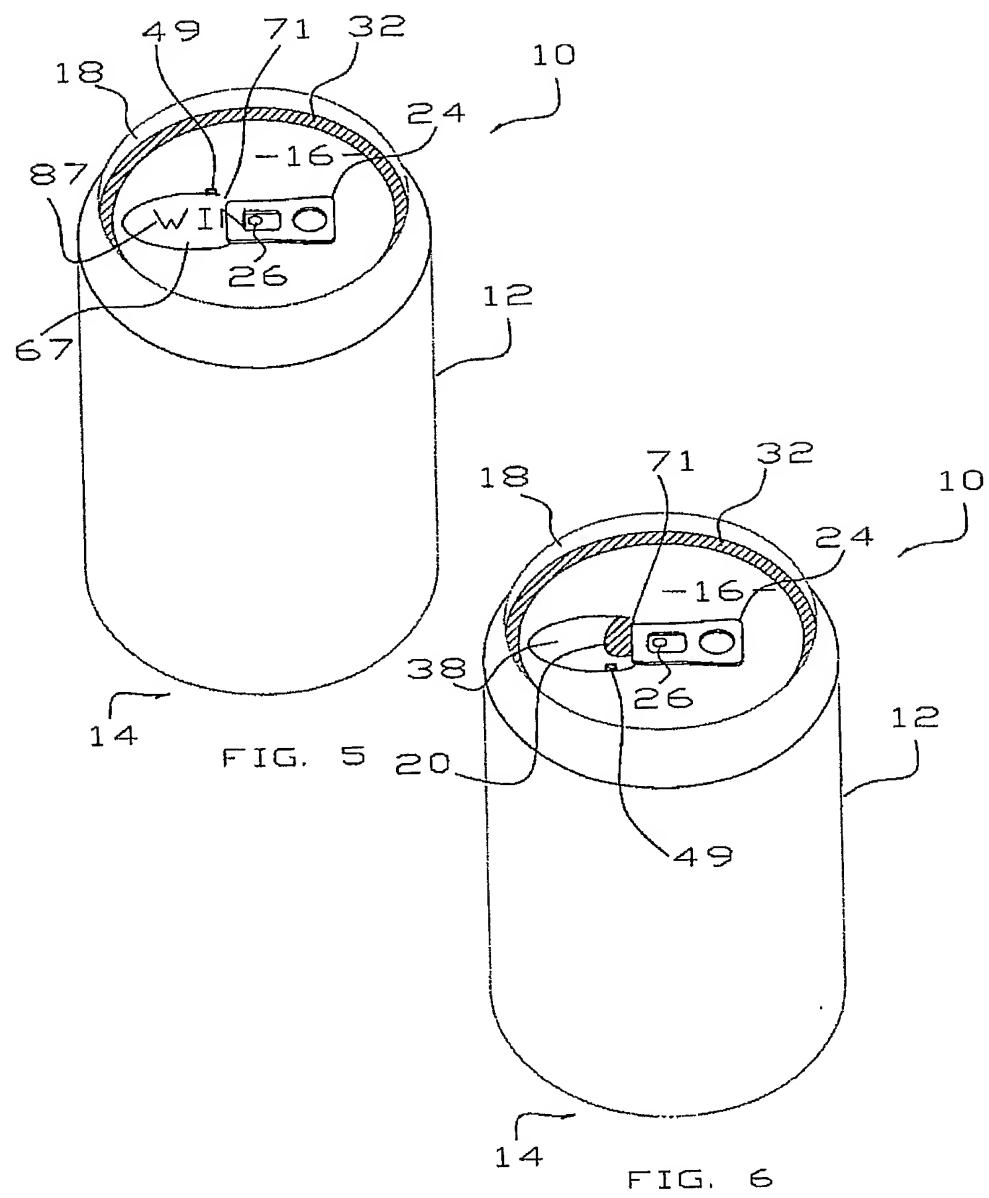
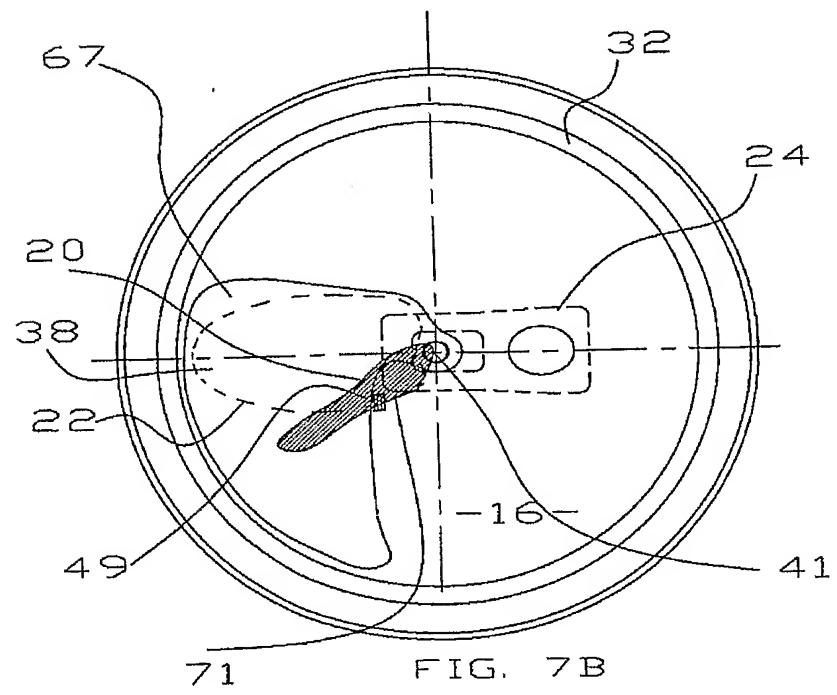
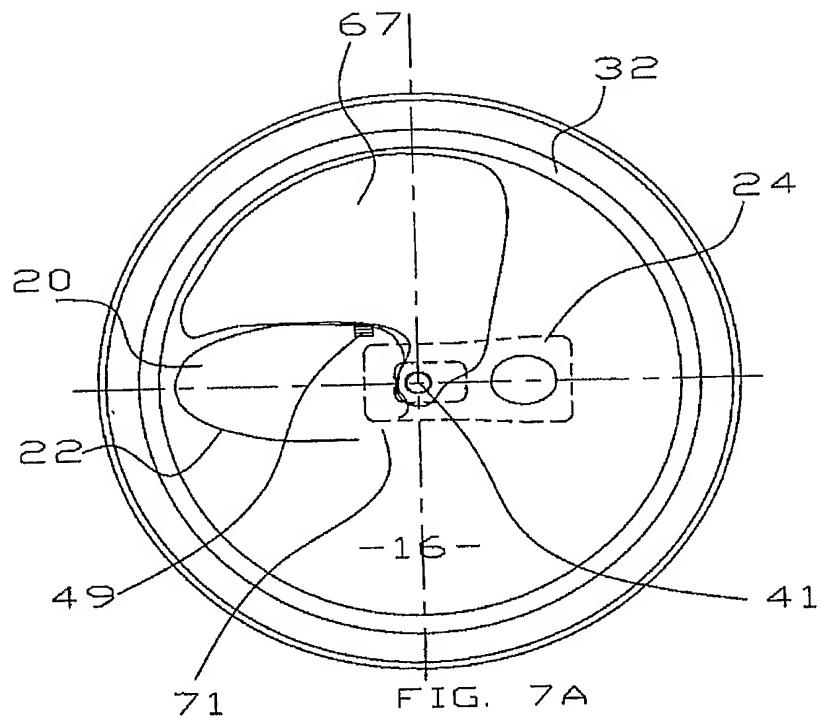
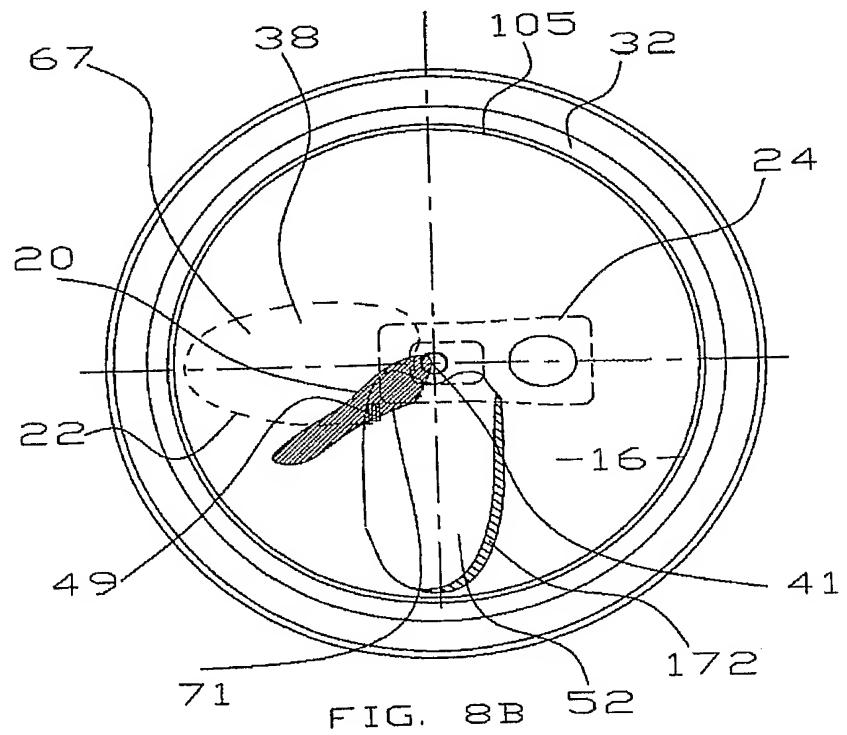
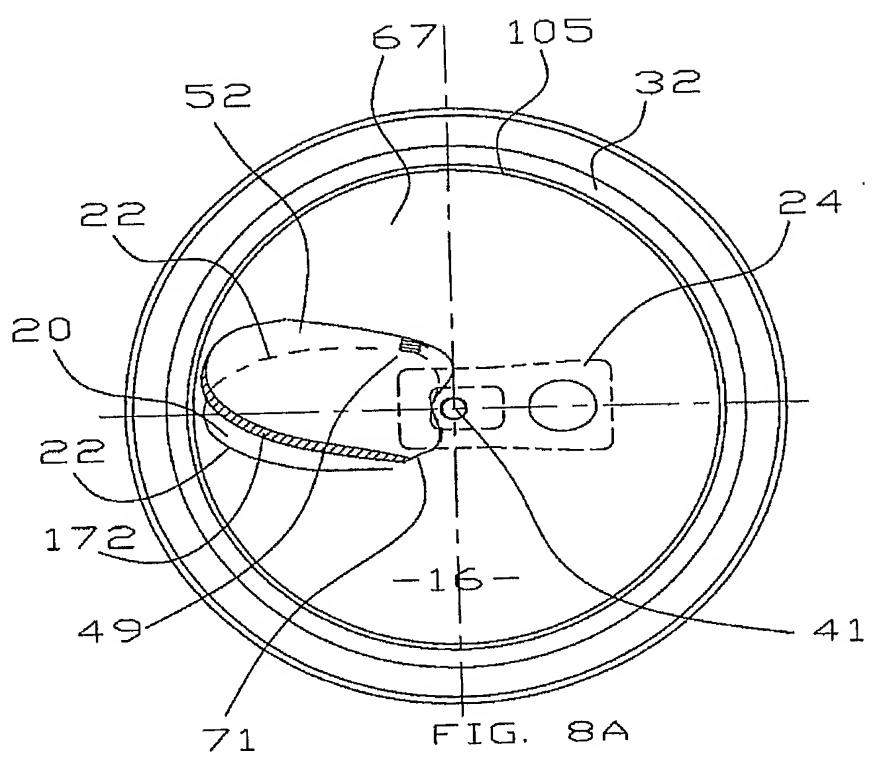
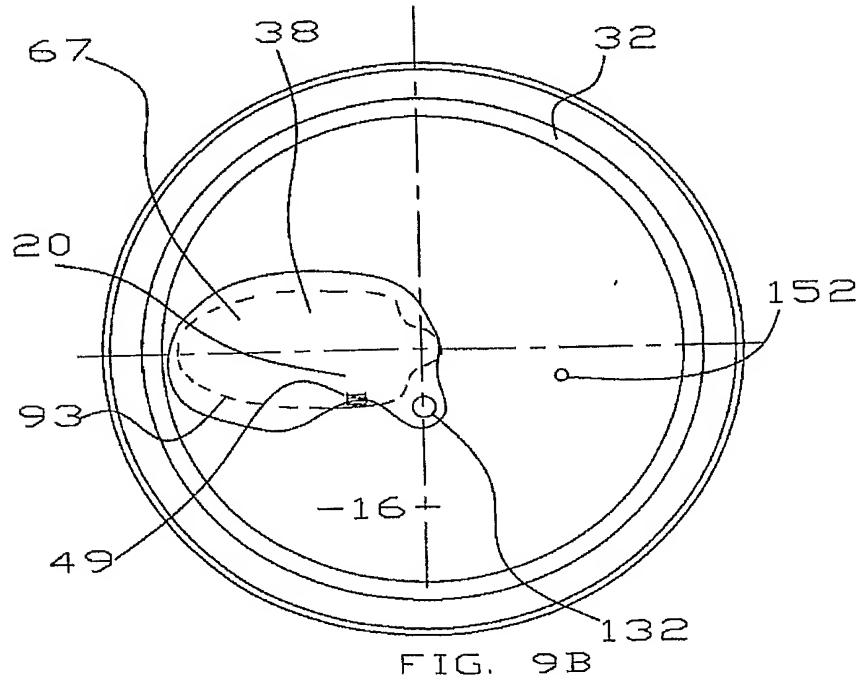
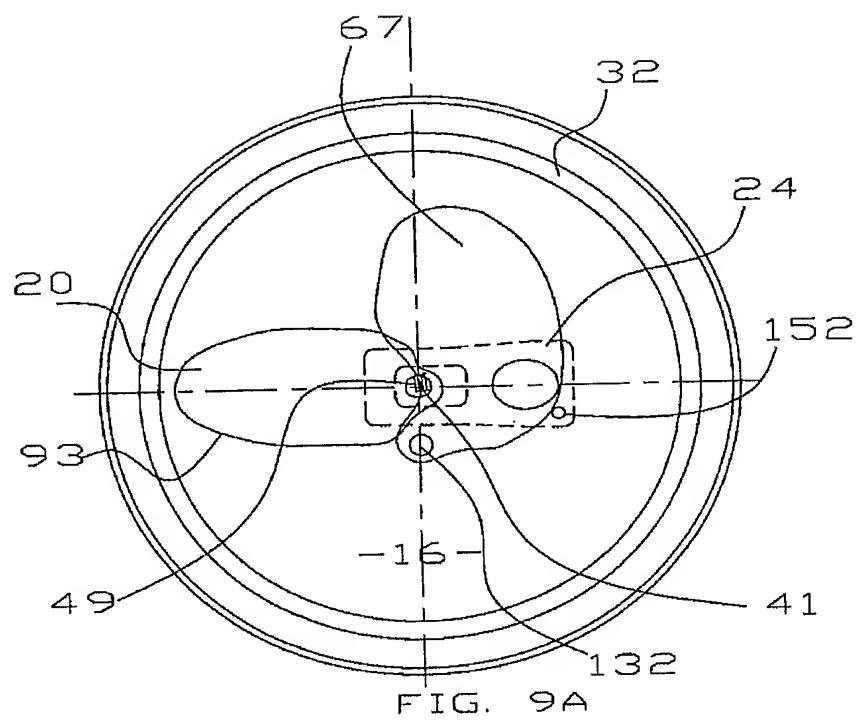


FIG. 4









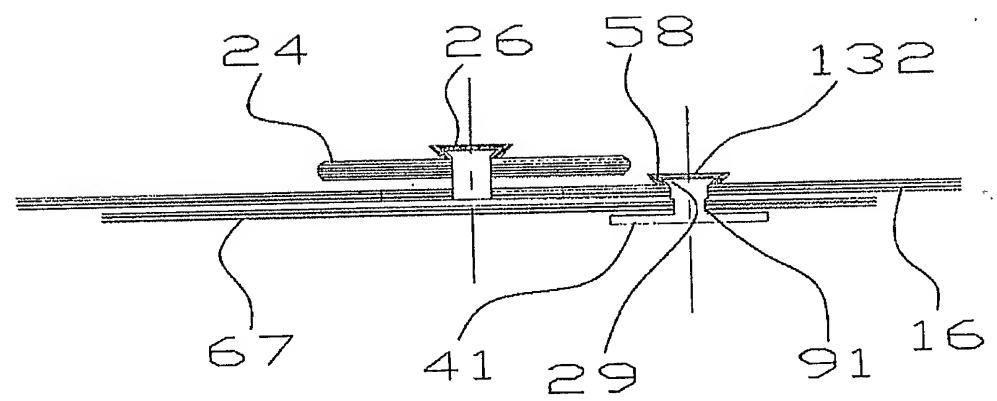
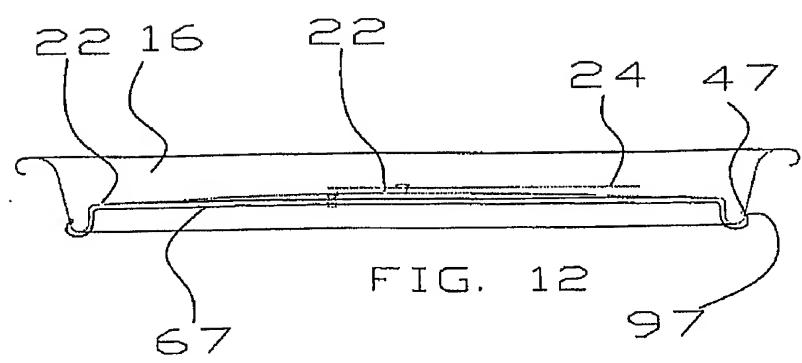
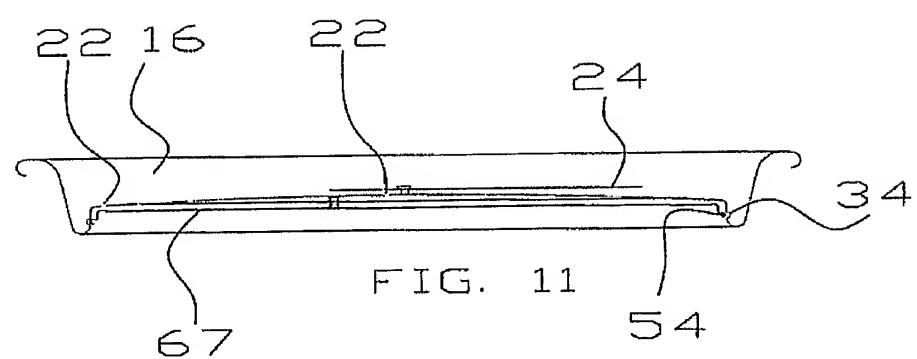


FIG. 10



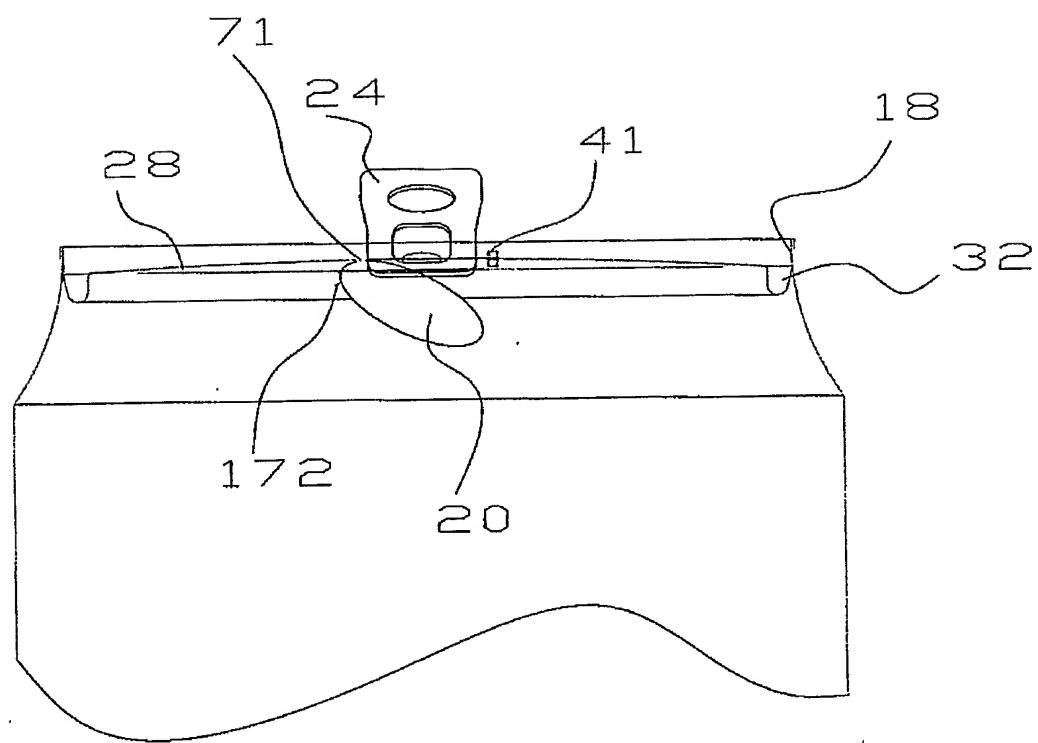


FIG. 13

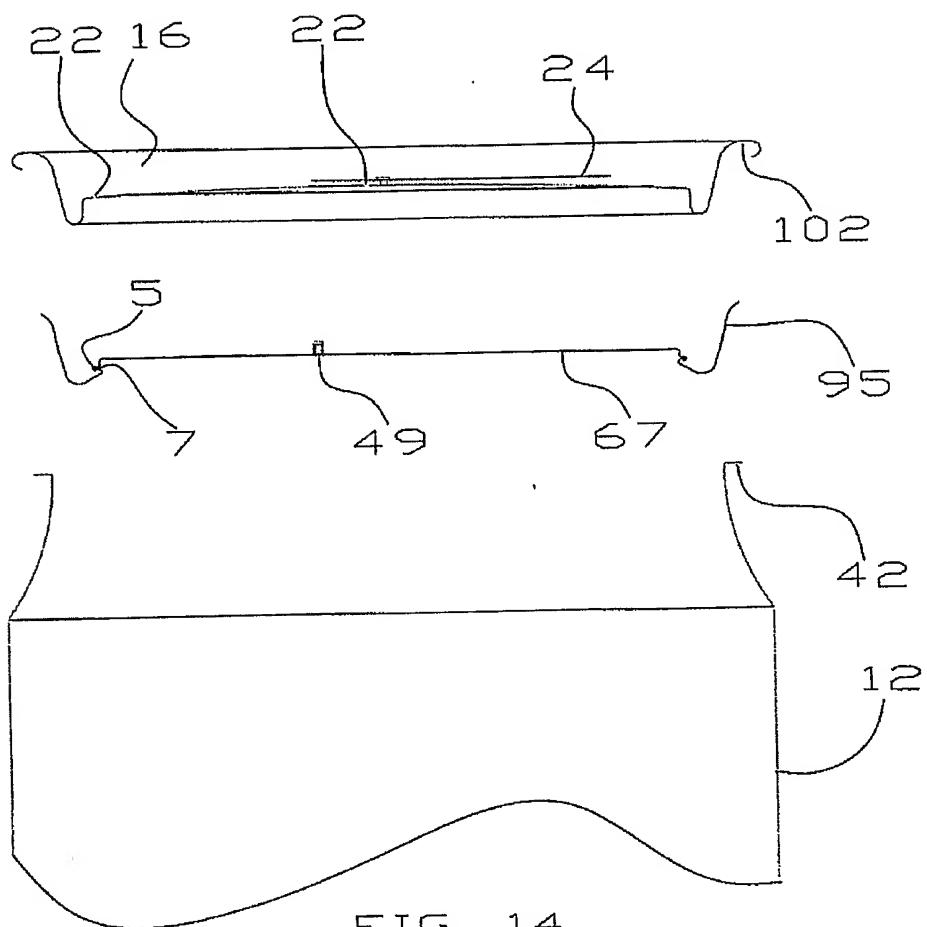


FIG. 14

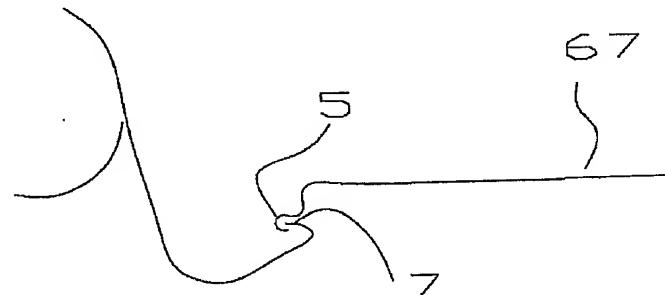


FIG. 15